



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/677,342	10/02/2000	Ho-Kyu Choi	678-535 (P9548)	3538
28249	7590	01/25/2005	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			TSEGAYE, SABA	
			ART UNIT	PAPER NUMBER
			2662	

DATE MAILED: 01/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/677,342

Applicant(s)

CHOI ET AL.

Examiner

Saba Tsegaye

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 14-18 and 28-31 is/are allowed.
- 6) ☒ Claim(s) 1-4, 10-13, 19, 21 and 27 is/are rejected.
- 7) ☒ Claim(s) 5-9, 20 and 22-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
- Paper No(s)/Mail Date 12/09/04.

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 2662

## DETAILED ACTION

### *Response to Amendment*

1. This Office Action is in response of the amendment filed on 10/12/04. Claims 1-31 are pending. Claims 1-4, 10-13, 19, 21 and 27 are rejected. Claims 14-18 and 28-31 are allowed. Claims 5-9, 20 and 22-26 are objected.

### *Double Patenting*

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. Claims 1 and 13 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 6 of U.S. Patent No. 6,747,963 B1.

Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1 and 13 of the instant application merely broadens the scope of the claims 1 and 6 of the Patent by eliminating the elements and their functions of the claims. It has been held that the omission an element and its function is an obvious expedient if the remaining elements perform the same function as before. *In re Karlson*, 136 USPQ 184 (CCPA). Also note *Ex parte*

Art Unit: 2662

*Rainu*, 168 USPQ 375 (Bd.App.1969); omission of a reference element whose function is not needed would be obvious to one skilled in the art.

***Claim Rejections - 35 USC § 103***

4. Claims 1-4 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wang et al. (US 6,587,447 B1).

Regarding claims 1 and 13, Wang discloses a method comprises: detecting, at a receiver end of the transmission system the status of a transmitted frame (i.e., the base station or mobile station depending on whether transmission is in the reverse or forward link) (determining whether the base station has downlink and uplink traffic channel data) indicating one of two possible transmission modes (driving if there is no traffic data) including when a gating-off of the traffic channel occurs, and when no gating-off of traffic occurs and normal traffic is being transmitted (gating on control data at the determined gating slot position and gating off control data in other slot position) (column 4, lines 29-42; column 8, lines 60-67). Further, Wang discloses that a transmitter determines when traffic is to be gated-off in a transmission and sets indicator, which indicates to a receiving unit when traffic in the frame is gated off or on. Wang does not expressly disclose determining a gating slot position when there is no data to transmit on the traffic channel **for a predetermined time period**. The transmitter described in the method of Wang would need to determine when traffic is to be gated-off that is when no data is transmitted. The method of Wang could be modified so that the transmitter to wait for predetermined period of time to know whether a data is presented to transmit or not.

Therefore, It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the method of Wang, with the ability to determine a gating slot

Art Unit: 2662

position when there is no data to transmit on the traffic channel **for a predetermined time period**. One of ordinary skill in the art would have been motivated to do this because it is an efficient way of determining whether a data is presented to transmit or not, and would make the system more reliable .

Regarding claims 2-4, Wang discloses, in Fig. 1B, the method wherein the channel data comprises a series of frames, each frame includes a plurality of slots (16 power control groups), slots in each frame are divided into a plurality of gating slot groups (131, 133, 137, 139), and each gating slot group has a determined gating slot position (135) (column 6, lines 9-35).

Regarding claim 10, Wang discloses, in Fig. 1B, the method wherein the gating on control data includes a pilot symbol (136) and a TPC bit (135) (column 6, lines 9-35).

Regarding claim 11, Wang discloses, in Fig. 1B, the method wherein the gating on control data includes a TPC bit (135) located in the determined gating slot position and a pilot symbol (136) located in a slot previous to the determined gating slot position (column 6, lines 9-35).

Regarding claim 12, Wang discloses that one or two power control bits per frame are utilized as a DTX indicator to keep the target Eb/No from unnecessarily increasing during DTX (claimed receiving a gating rate from a base station) (column 5, lines 45-50; column 6, lines 15-35). Wang does not expressly disclose receiving gating information indicating gating start time.

Art Unit: 2662

The method of Wang could be modified to receive gating information that indicates a gating start time in order to provide synchronization.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add information that indicates gating start time in the DTX indicator of Wang. One of ordinary skill in the art would have been motivated to do this because adding information that indicates gating start time allows the receiver to know when to look the indicator.

5. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wang in view of Padovani et al.

Wang discloses a signaling method for controlling unnecessary power increases and call droop during discontinuous transmission mode by setting the DTX indicator to indicate when frame is gated off or gated on. Further, Wang discloses that one or two power control bits per frame are utilized as a DTX indicator to keep the target  $E_b/N_0$  from unnecessarily increasing during DTX (claimed receiving a gating rate from a base station) (column 5, lines 45-50; column 6, lines 15-35). Wang does not expressly disclose receiving gating information indicating gating start time. The method of Wang could be modified to receive gating information that indicates a gating start time in order to provide synchronization.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add information that indicates gating start time in the DTX indicator of Wang. One of ordinary skill in the art would have been motivated to do this because adding information that indicates gating start time allows the receiver to know when to look the indicator.

Art Unit: 2662

Further, Wang does not expressly disclose transmitting DPCCH slot signal to form a random pattern for a predetermined duration.

Padovani teaches that a gated on power control groups are pseudo-randomized in their position within the frame (claimed transmitting slot signal to form a random pattern for a predetermined duration).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a method that transmit signal to form a random pattern for a predetermined duration, such as that suggested by Padovani, in the method of Wang in order to avoid interference. One of ordinary skill in the art would have been motivated to do this because transmitting signal in a random pattern reduces mutual interference so as to provide an increase in user capacity.

6. Claims 21 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Padovani et al. in view of Wang.

Padovani discloses a base station transmitter in a mobile communication system, comprising:

a gating position selector for determining a gating slot position when there is no data to transmit on the traffic channel for a predetermined time period (column 15, lines 50-61), and for dividing the slots in each frame into a plurality of gating slot groups, each of the gating slot groups having a random gating slot position (column 16, lines 30-43). Further, Padovani

Art Unit: 2662

discloses a gated transmission controller for controlling a traffic slot corresponding to the selected gating slot position (column 10, lines 16-28).

However, Padovani does not expressly disclose a DPCCH transmission system (as in claims 21 and 27); and gating information that includes gating start time and gating rate from a base station (as in claim 27).

Wang teaches a power control method for use in transmission of packets on DCCH of CDMA system.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a DPCCH transmission system, such as that suggested by Wang, in the CDMA communication system of Padovani. One of ordinary skill in the art would have been motivated to do this because DPCCH transmission system provides communications link reserved for a control information and predetermined pilot symbols.

Wang discloses that one or two power control bits per frame are utilized as a DTX indicator to keep the target  $E_b/N_0$  from unnecessarily increasing during DTX (claimed receiving a gating rate from a base station; as in claim 27).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add a system that receives a gating rate from a base station, such as suggested by Wang, to the system of Padovani.

One of ordinary skill in the art would have been motivated to do this because receiving a gating rate provides an improved power control method and system.

Padovani in view of Wang does not expressly disclose receiving gating information that includes gating start time.



Art Unit: 2662

However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to add an information that indicates gating start time in the system of Padovani in view of Wang in order to provide synchronization. One of ordinary skill in the art would have been motivated to do this because adding information that indicates gating start time allows the receiver to know when to look the indicator.

***Allowable Subject Matter***

7. Claim 5-9, 20 and 22-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. Claims 14-18 and 28-31 are allowed.

***Response to Arguments***

9. Applicant's arguments with respect to claims 1-31 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Saba Tsegaye whose telephone number is (571) 272-3091. The examiner can normally be reached on Monday-Friday (7:30-5:00), First Friday off.

Art Unit: 2662

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ST  
January 17, 2005

  
**JOHN PEZZLO**  
**PRIMARY EXAMINER**